

FIGURE 1

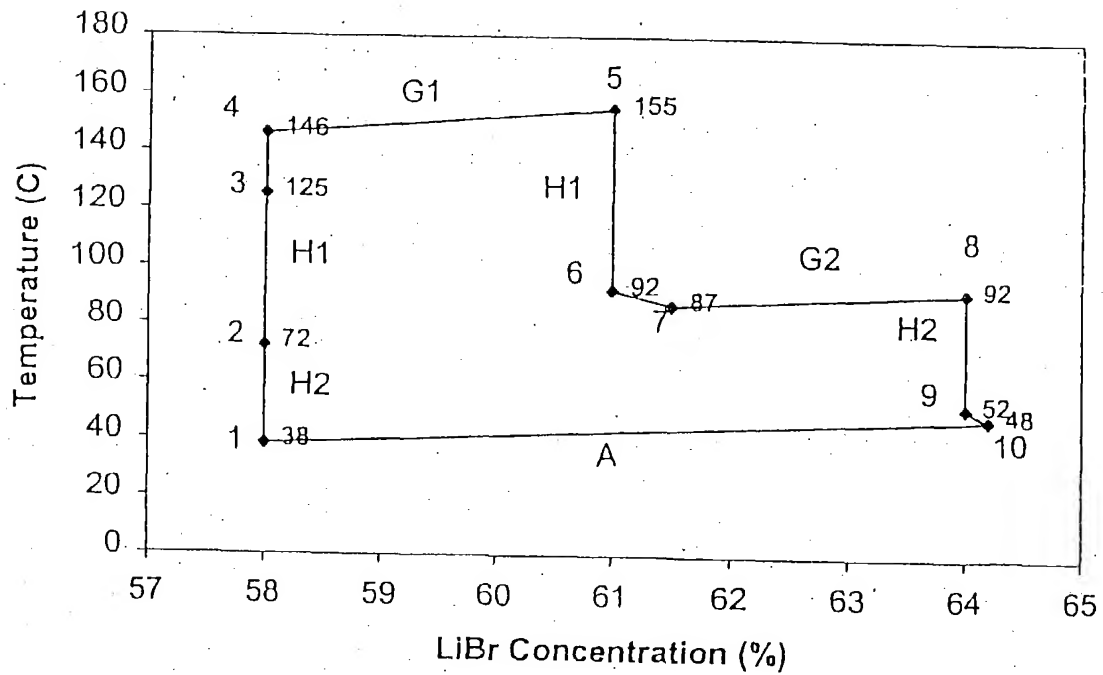


FIGURE 2

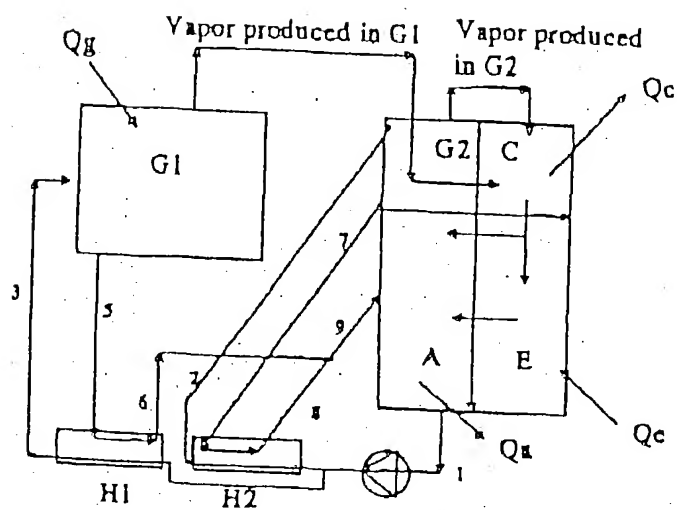


FIGURE 3

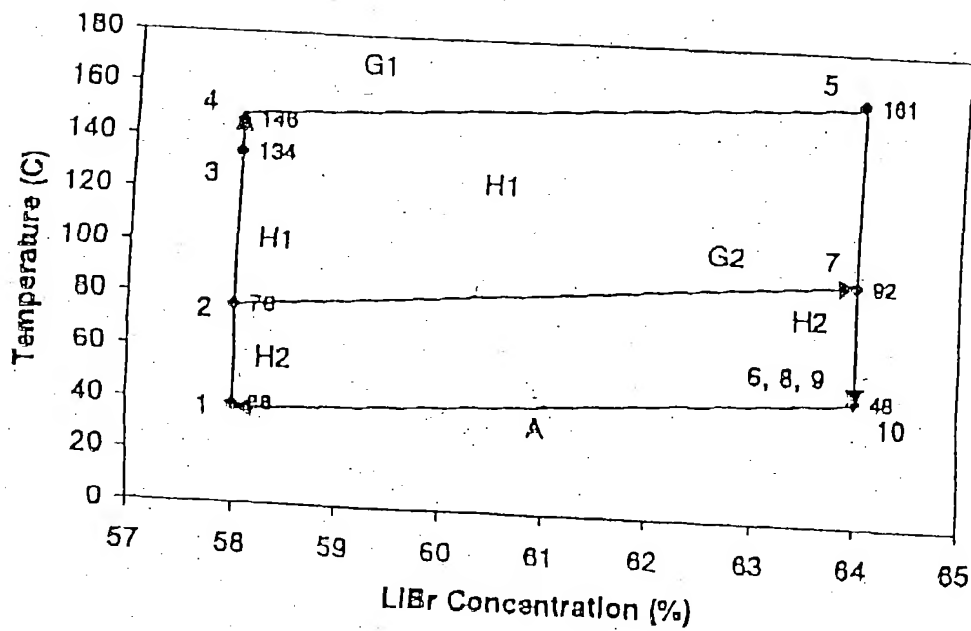


FIGURE 4

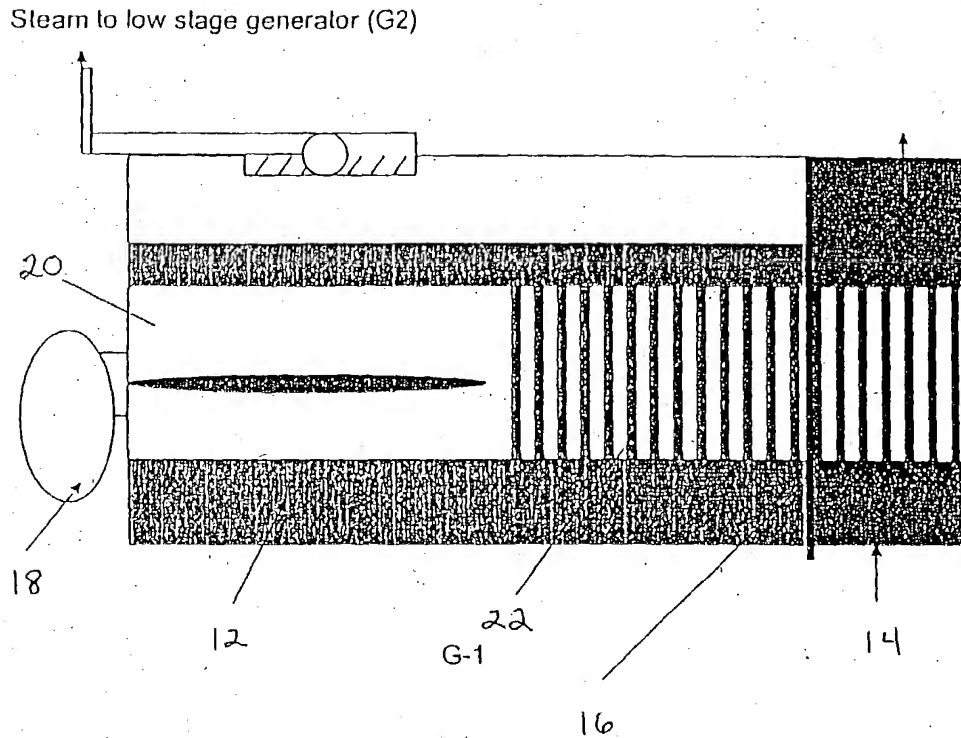


FIGURE 5

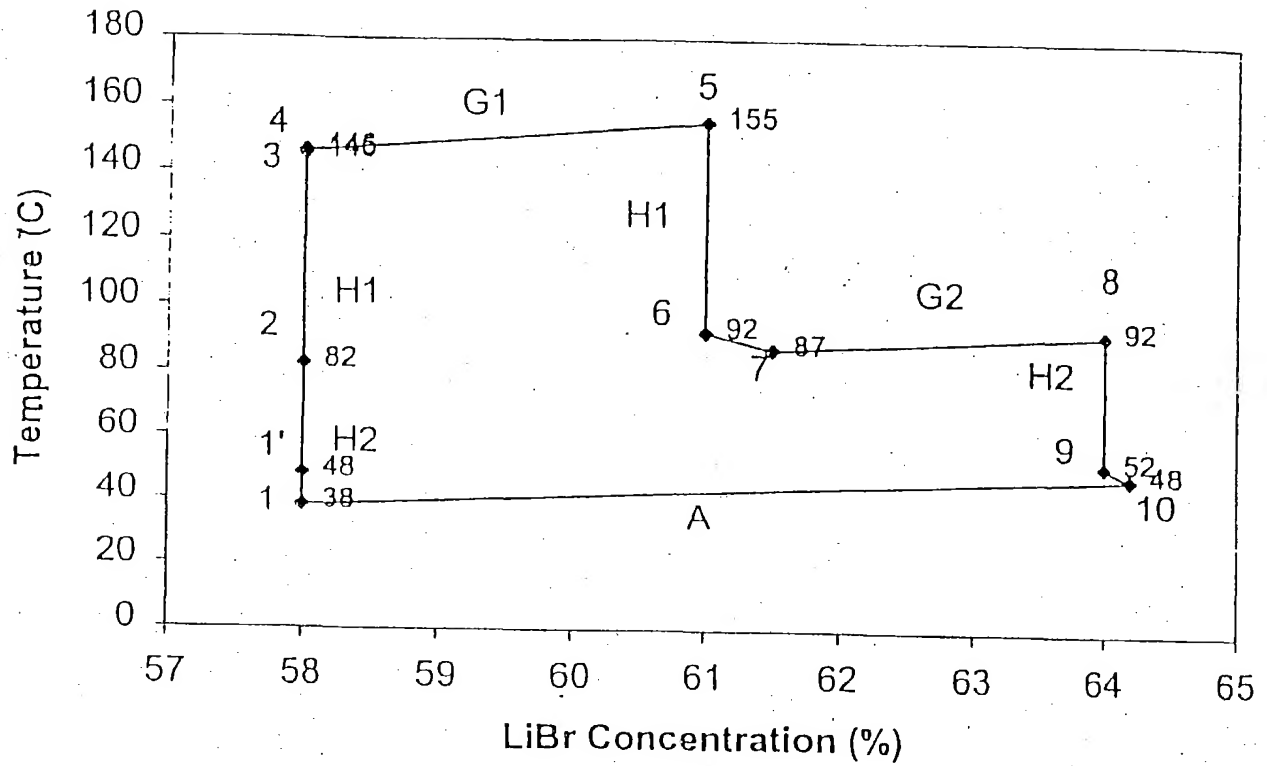


FIGURE 6A

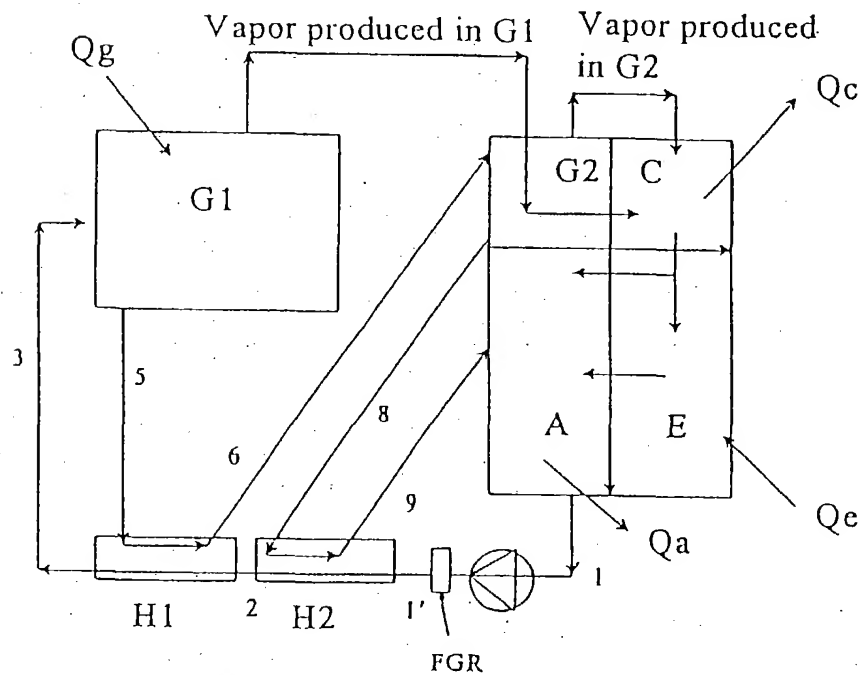


FIGURE 6B

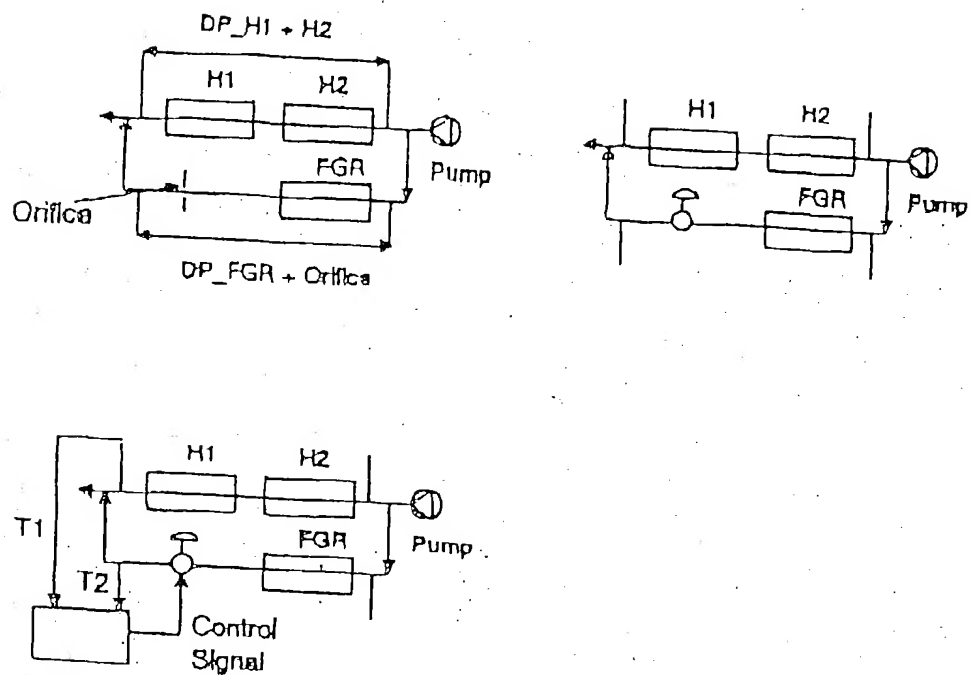


FIGURE 6C

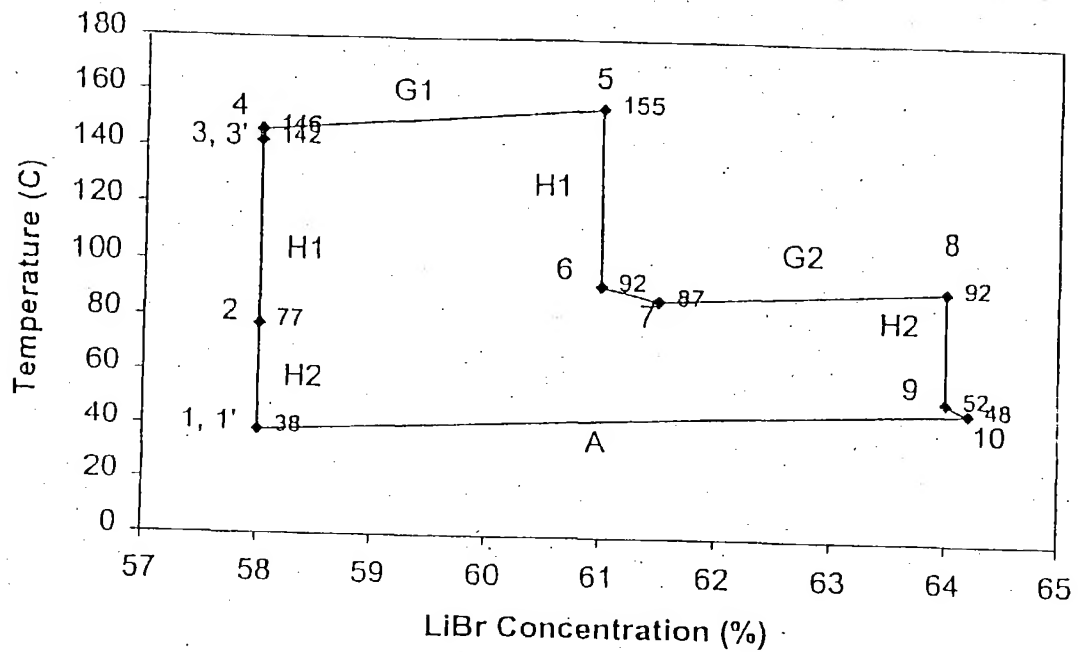
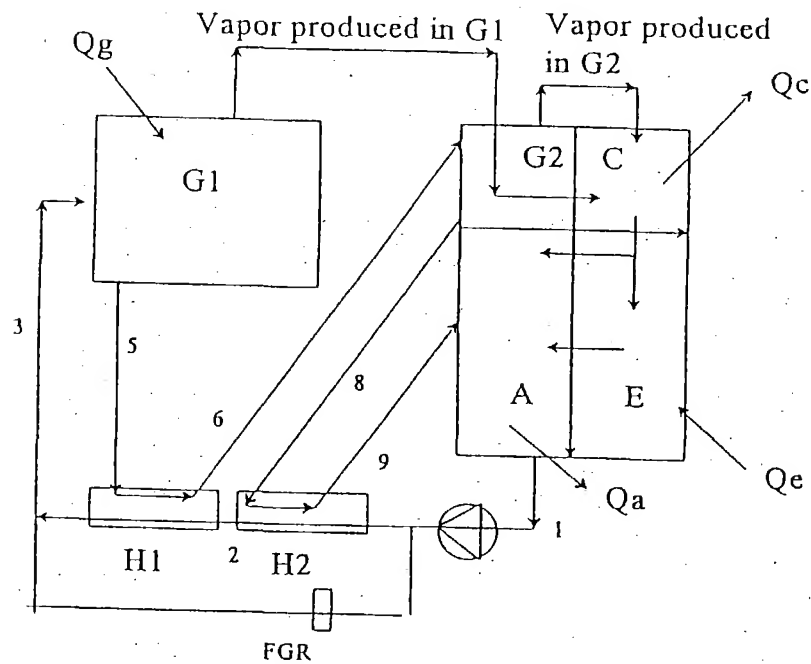


FIGURE 7A



(b) Schematic

FIGURE 7B

The diagram illustrates a two-stage vapor compression refrigeration cycle. It consists of the following components and flow paths:

- Compressor (C):** The top right component, which compresses the refrigerant vapor from the flash chamber (E) and the condenser (A). Heat rejection from the compressor is labeled Q_c .
- Condenser (A):** The middle right component, where the refrigerant rejects heat to the cooling medium. Heat rejection is labeled Q_a .
- Flash Chamber (E):** The bottom right component, which separates the liquid and vapor phases of the refrigerant. The liquid (8) is sent to the evaporator (H1), and the vapor (9) is sent to the compressor (C). Heat rejection from the flash chamber is labeled Q_e .
- Evaporator (H1):** The bottom left component, which absorbs heat from the space being cooled. Heat absorption is labeled Q_g .
- Subcooler (H2):** A component between the condenser (A) and the evaporator (H1) that subcools the liquid refrigerant. Heat rejection from the subcooler is labeled Q_g .
- Expansion Valve (3):** The valve that expands the refrigerant from the condenser (A) to the evaporator (H1).
- Refrigerant Flow:** The cycle is completed by the flow of refrigerant through the components, with intermediate flows labeled 4, 5, 6, 7, 8, and 9.
- Labels:** The diagram includes labels for heat rejection (Q_c , Q_a , Q_e), heat absorption (Q_g), and refrigerant flow paths (1, 2, 3, 4, 5, 6, 7, 8, 9).

FIGURE 8B

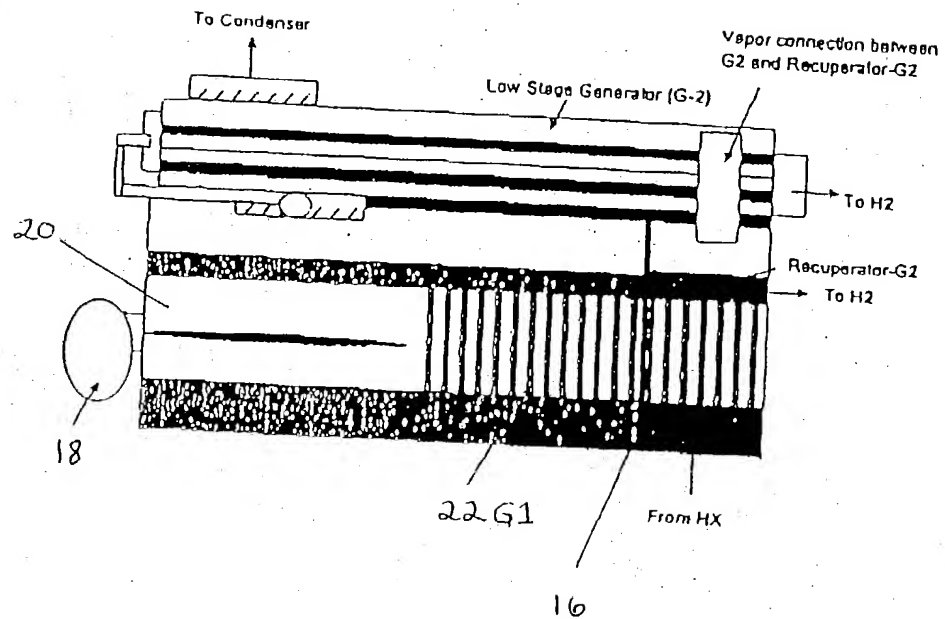


FIGURE 9

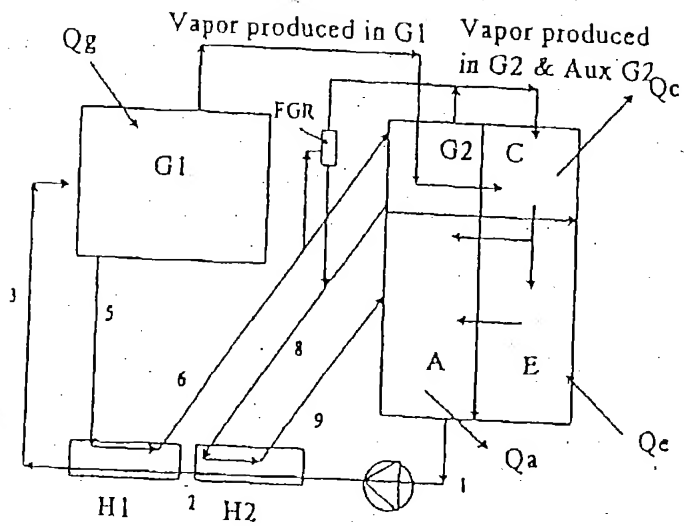


FIGURE 10

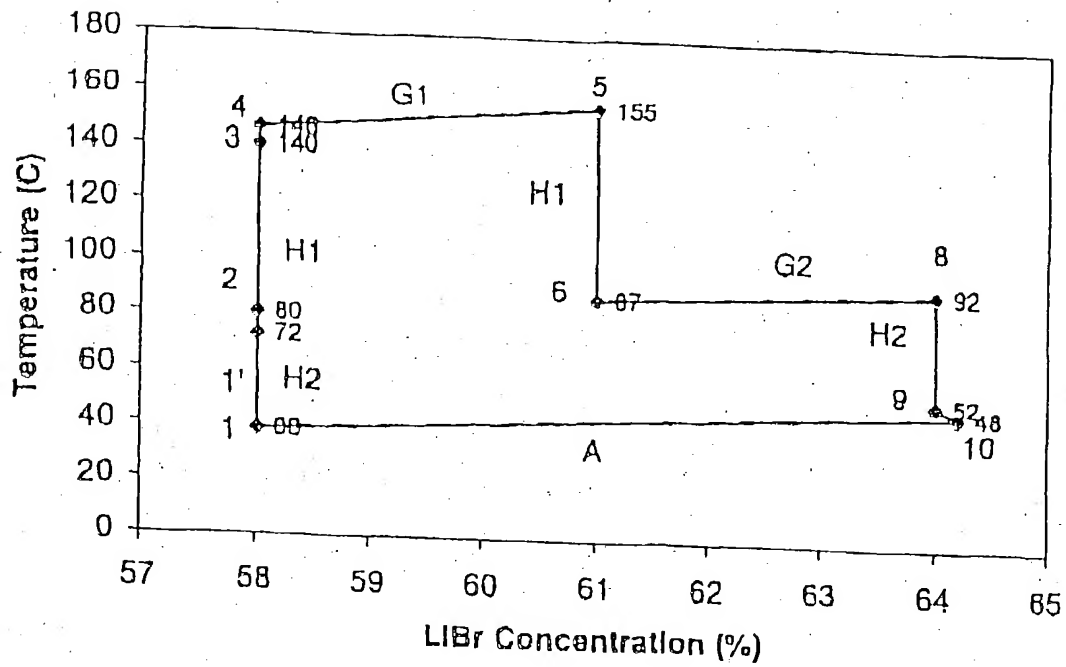


FIGURE 11A

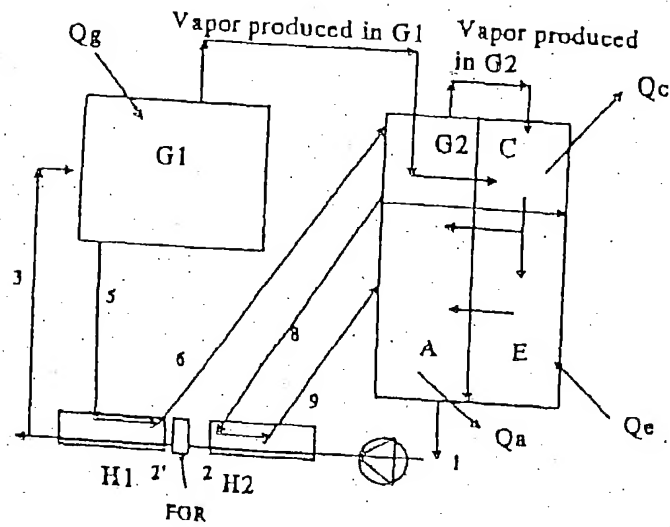


FIGURE 11B

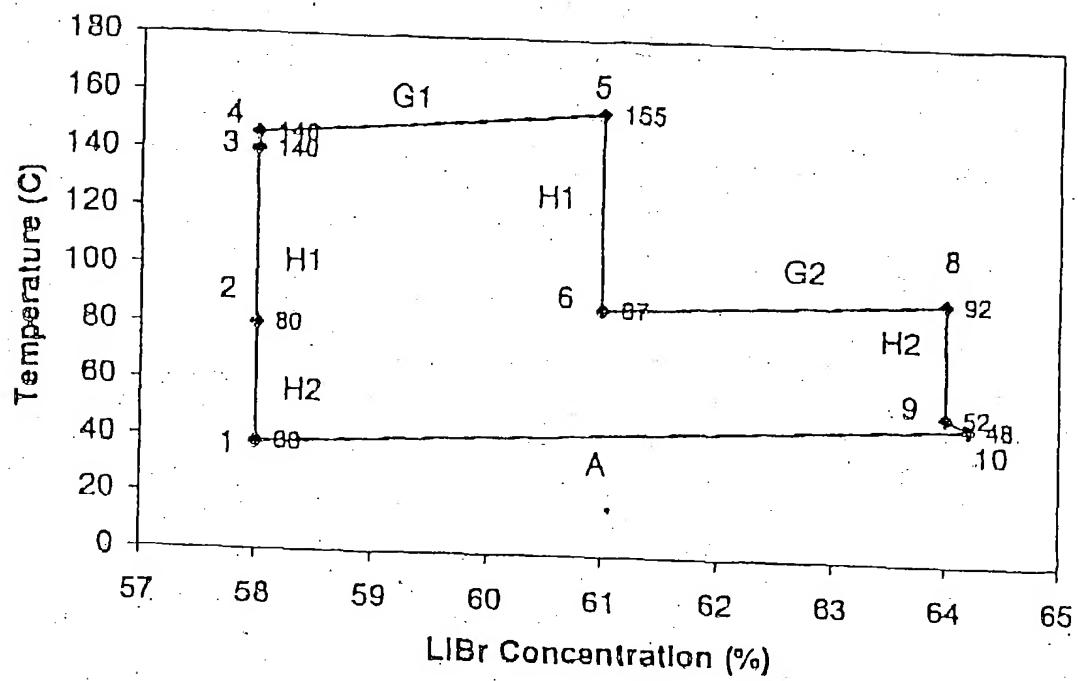


FIGURE 12A

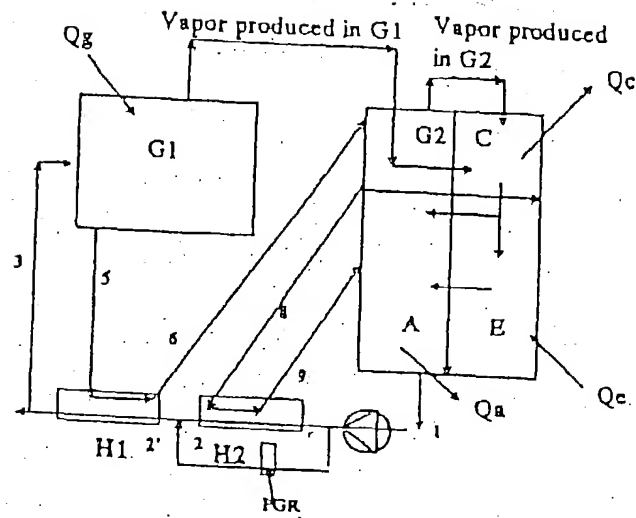


FIGURE 12B